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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,411	02/13/2006	Fabian Dietrich	S3-03P08340	2570

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EXAMINER

BARNES, CRYSTAL J

ART UNIT	PAPER NUMBER
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2121

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/565,411	Applicant(s) DIETRICH ET AL.	
	Examiner Crystal J. Barnes	Art Unit 2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-22 and 24-28 is/are rejected.
- 7) ☒ Claim(s) 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>23 Jan. & 13 Mar. 2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The following is an initial Office Action upon examination of the above-identified application on the merits. Claims 1-14 have been cancelled per Preliminary Amendment received on 23 January 2006. Claims 15-28 are pending in this application.

Priority

2. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 365(c) is acknowledged. Applicant has complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 365(c).

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

4. The examiner has considered the information disclosure statements (IDS) submitted on 23 January and 13 March 2006.

Claim Objections

5. Claim 17 is objected to because of the following informalities: repeated "wherein" should be deleted in line 2. Appropriate correction is required.
6. Claim 18 is objected to because of the following informalities: "the" should be deleted in line 2 and "use" should be changed to "using" in line 3. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 24 recites the limitation "the type path" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 22 recites the limitation "type path".

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 15-21 are rejected under 35 U.S.C. 102(b) as being anticipated by DE 19834943 A1 to REYER et al.

As per claim 15, the REYER et al. reference discloses a method of generating a structure representation describing a specific automation system from a model structure representation describing a general automation system, wherein the model structure representation has a structured representation of functional groups in the general automation system and respective links to one another, and each functional group is assignable one or more components of the specific automation system, the method which comprises the following steps: providing a text file ("function group data module") representing the model structure representation ("function group data module") to a data processing device ("autonomous function module") that controls the specific automation system ("automation system"); determining, with the data processing device ("autonomous function module"), those components ("sensors, actuators") of the specific automation system ("automation system") that are jointly assignable to a functional group ("function group") in the model structure representation

("function group data module"); and entering the components ("sensors, actuators") ascertained in the determining step into the model structure representation ("function group data module") to generate the structure representation ("function group data module") describing the specific automation system ("automation system").

As per claim 16, the REYER et al. reference discloses instructions ("relevant data, respective control programme") contained in the text file ("function group data module") prompt the data processing device ("autonomous function module") to check only selected functional groups ("function group") to determine whether a plurality of components ("sensors, actuators") of the specific automation system ("automation system") are jointly assignable to the functional group ("function group").

As per claim 17, the REYER et al. reference discloses the determining step comprises sending an electronic query ("fresh start") to the respective components ("sensors, actuators") or to a common control device ("autonomous function module") that is superordinate to the respective components ("sensors, actuators"); and responding, with the respective components ("sensors, actuators") or with the superordinate common control device ("autonomous function module"),

to the electronic query ("fresh start") by sending an electronic response ("address list") to the data processing device ("autonomous function module") with a respectively unique identification key ("function group addresses").

As per claim 18, the REYER et al. reference discloses components ("sensors, actuators") of the specific automation system ("automation system") can each be jointly assigned to a functional group ("function group") in the model structure representation ("function group data module") using identification keys ("function group addresses") of a common type when sending the electronic response ("address list").

As per claim 19, the REYER et al. reference discloses the responding step comprises transmitting further data characterizing the respective components ("sensors, actuators") with the electronic response ("address list").

As per claim 20, the REYER et al. reference discloses also determining a component ("autonomous function module") for a functional group ("function group") that is assignable a single component ("autonomous function module") and entering the single component ("autonomous function module") into the model structure representation ("function group data module") to complete the structure

representation ("function group data module") describing the specific automation system ("automation system").

As per claim 21, the REYER et al. reference discloses addressing ("address list") the respective components ("sensors, actuators") of the specific automation system ("automation system") with the data processing device ("autonomous function module") using a component path ("function group addresses") that contains at least one identification ("function group addresses") for the respective component ("sensors, actuators").

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 22, 24 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 19834943 A1 to REYER et al. in view of US Pub. No. 2004/0078105 A1 to Moon et al.

As per claim 22, the REYER et al. reference does not expressly disclose ascertaining, with the data processing device, information that is typical of a component of a functional group or that is common to a plurality of components of a functional group by generating from the relevant component path a type path indicating the relevant functional group; and using the type path with the data processing device to read the information for the relevant functional group from the text file.

The Moon et al. reference discloses

(see page 13 [0143], "Data transformations use XML element and attribute mappings to map a specific value from a source data set to an element or attribute in a target data set. The MAPPINGS section defines the specific mappings. Elements may consist of any valid XML element, including containing attributes and sub-elements. When such a compound element is copied from a data set, its entire structure is copied to the target data set. Each MAP entry defines a specific source and target. The source is the source of the data, either as a specific XML path in the Data Set or as a predefined internal function. The target is the XML path that is to receive the value. If the source path has no data, nothing is copied

in the target; any existing data in the target remains unchanged. If the source path has data, any existing data in the target is overwritten.")

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to the address list taught by REYER et al. to include the element and attribute mappings taught by the Moon et al. reference.

One of ordinary skill in the art would have been motivated to modify the address list to include the element and attribute mappings to provide data transformations to define the structure and expected names of values of the data.

As per claim 24, the REYER et al. reference does not expressly disclose formulating the component path and the type path with the language Xpath.

The Moon et al. reference discloses

(see page 8 [0073], "Hierarchical data often exists in XML, such that an element is nested within another element. FIG. 7G shows an example where CITY resides within ADDRESS. In such cases, the name for an element must be provided as a complete X-Path. For example, to get the CITY value, "MyData/ADDRESS/CITY" would be used as the name of the value.")

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to the address list taught by REYER et al. with the XML path taught by the Moon et al. reference.

One of ordinary skill in the art would have been motivated to modify the address list with the XML path to define specific source and target data sets.

As per claim 28, the REYER et al. reference does not expressly disclose using XML for the text file representing the model structure representation.

The Moon et al. reference discloses

(see page 2 [0012], "The method may further comprise defining the workflow process, the procedural components, the control links, the data components and the data links as XML files.")

(see page 5 [0046], "If database persistence is not used, each workflow process model is defined in its own XML model file.")

(see page 7 [0066], "The data format is defined in an XML manner. The format defines the structure and expected names of values of the data that exists in a data set 610-622 when it has data.")

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the data module taught by REYER et al. as a XML taught by Moon et al.

One of ordinary skill in the art would have been motivated to modify the data module as a XML to define the structure and expected names of values of the data.

13. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 19834943 A1 to REYER et al. in view of US Pub. No. 2004/0170138 A1 to Blevins et al.

As per claim 25, the REYER et al. reference does not expressly disclose converting the structure representation describing the specific automation system into a graphical representation by the data processing device.

The Blevins et al. reference discloses

(see page 9 lines 23-26, "the user interface (UI) 4 includes an active graphical control display 58, which may be generated by a DeltaV.TM. application, representative of the control routine 60 implemented by the controller 20.")

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the autonomous function module taught by REYER et al. to include the user interface taught by Blevins et al.

One of ordinary skill in the art would have been motivated to modify the autonomous function module to include the user interface to provide means for an operator to monitor/control the automated process.

As per claim 26, the Blevins et al. reference discloses displaying the graphical representation ("an active graphical control display 58") based on the structure representation on a user device ("user interface (UI) 4") associated with the data processing device.

As per claim 27, the Blevins et al. reference discloses converting the structure representation into the graphical representation ("an active graphical control display 58"), and displaying the graphical representation ("an active graphical control display 58") using a browser device (see page 9 lines 26-31, "web browser") on a user device ("user interface (UI) 4").

Allowable Subject Matter

14. Claim 23 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art with respect to distributed process control in general:

USPN 7,184,967 B1 to Mital et al.

USPN 6,915,304 B2 to Krupa

USPN 6,865,429 B1 to Schneider al.

USPN 5,831,869 to Ellis et al.

USPN 5,625,565 to Van Dyke

US Pub. No. 2005/0039193 A1 to Choi et al.

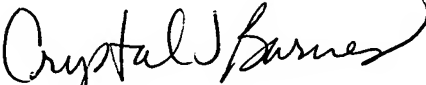
US Pub. No. 2004/0031015 A1 to Ben-Romdhane et al.

US Pub. No. 2003/0016242 A1 to Ramahefarivony et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Crystal J. Barnes whose telephone number is 571.272.3679. The examiner can normally be reached on Monday-Friday alternate Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571.272.3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


CRYSTAL J. BARNES
PRIMARY PATENT EXAMINER
CJB
24 March 2007